

## Preventive Care Among Participants in the Medical Monitoring Project 2005-2009

The Medical Monitoring Project (MMP) is an ongoing population-based surveillance system designed to assess behaviors and clinical outcomes among a representative sample of HIV-infected adults receiving care in the US. The MMP is currently conducted in 17 states and six cities by local and state public health departments in collaboration with the Centers for Disease Control and Prevention (CDC). The MMP arose out of the need for a nationally-representative, population-based surveillance system to assess clinical outcomes, risk behaviors, adherence data, and clinician treatment patterns impacting the quality of HIV care. Washington state has completed three cycles of data collection in 2005, 2007, and 2008, and we are currently in the final months of data collection for 2009.

For each cycle of the MMP, 40 facilities across Washington that provide medical care to HIV-infected patients are randomly selected and invited to participate. The facilities are large and small, urban and rural, HRSA (Federal Health Resources Services Administration) and non-HRSA funded. Among the facilities randomly selected in King County, participation throughout the four cycles of the project has ranged from 73-94% (Table 10).

Across Washington, a random sample of 400 patients with HIV seen at participating facilities within a defined four-month period is selected; some participating facilities will not have seen a patient with HIV during the four-month period. The selected patients are contacted and invited to participate in the project. Patient participation rates in King County have ranged from 30-47%

throughout the cycles (Table 10). Since 2005, 479 King County residents have participated in the project, an overall 40% participation rate.

In order to collect comprehensive information on each individual participating in the MMP, a questionnaire with modules covering access to health care, treatment adherence, sexual behaviors, drug use behaviors, and access to prevention services is administered to each participant. Data from the questionnaire is combined with information from a review of the participant's medical records. At this time, only information from the questionnaire is available for the four years of data collection.

As people with HIV live longer, it is increasingly imperative that they receive adequate and consistent primary care with appropriate screenings and immunizations. This article utilizes data from the MMP interview, based on self report, to assess whether the MMP participants are receiving the recommended preventive care.

The demographic characteristics of King County MMP participants are displayed in Table 11. Most of the participants were male (88%), and white (67%). The modal age category was 45-54 years (42%). Almost all of the participants (97%) had health insurance in the 12 months preceding the interview.

The majority of participants (90%) reported that they had ever received PPD screening for tuberculosis (TB). Guidelines for TB screening of HIV-infected persons

**Table 10. Facility and Patient Participation, Medical Monitoring Project, King County 2005–2009**

	2005	2007	2008	2009
<b>Facilities</b>				
# Selected	22	22	31	27
# Agreed	16	16	26	19
# with HIV patients during study period	15	14	3	5
% participated	73%	82%	94%	89%
<b>Patients</b>				
# Selected	299	297	288	314
# Agreed	89	133	134	123
% participated	30%	45%	47%	39%

call for TB screening when HIV infection is first diagnosed.<sup>1</sup> Over three-quarters (76%) of participants reported receiving an influenza vaccination in the previous 12 months. US Public Health Service (USPHS) guidelines call for annual vaccination against influenza for adults and children who have immunosuppression caused by HIV.<sup>2</sup>

Over three-quarters (77%) of all participants reported being screened for hepatitis B. Almost half (47%) of the MMP participants who reported being hepatitis B negative or not knowing their hepatitis B status said they had received hepatitis B immunization. The USPHS guidelines state that all providers should know the hepatitis B status of their HIV-infected patients; for patients who are hepatitis B negative, vaccination is recommended.

Over half (55%) of the sexually active MMP participants said they had been screened for a sexually transmitted disease (STD) in the last 12 months. USPHS Guidelines state that screening for STDs should be done at the initial care visit and then repeated periodically (i.e., at least annually) if the patient is sexually active or if earlier screening revealed STDs. Screening should be done more frequently (e.g., at 3-6-month intervals) for asymptomatic persons at higher risk.<sup>3</sup> Local care guidelines recommend that all men who have sex with men (MSM) be tested for syphilis at least annually, and that MSM with any of the following risks be tested for syphilis and other STDs every three months: 1) bacterial STD diagnosis in the last year; 2) methamphetamine use or "popper" use; 3) unprotected anal sex with a partners of unknown or discordant HIV status.<sup>4</sup>

**Table 11. Characteristics of Medical Monitoring Project Participants, King County 2005-2009 (N=479)**

<b>Gender</b>	<b>N.</b>	<b>%</b>
Male	423	88%
Female	55	12%
Transgender	1	<1%
<b>Age</b>		
18-34	48	10%
35-44	158	33%
45-54	199	42%
≥55	74	15%
<b>Race</b>		
White	321	67%
Black	86	18%
Latino	57	12%
Native American/Alaska Native	32	7%
Asian	10	2%
<b>Health insurance last 12 months</b>	463	97%
<b>Ever PPD screen (2005-2008 only)</b>	320/356	90%
<b>Influenza vaccine</b>	364	76%
<b>Pap smear (women only)</b>	22/55	40%
<b>Any hepatitis vaccine</b>	284	59%
<b>Screened for hepatitis B (2005-2007 only)</b>	170/222	77%
<b>Hep B vaccination among HBV negatives or never screened (2005-2007 only)</b>	84/179	47%
<b>STD screen last 12 months (sexually active only)</b>	176/322	55%
<b>Nadir CD4 &lt;350 currently on ART</b>	260/296	88%
<b>Nadir CD4 350-500 currently on ART</b>	33/42	79%

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Forty percent of female participants reported receiving a Pap smear in the previous 12 months. USPHS guidelines recommend that a Pap smear be obtained twice during the first year after diagnosis of HIV infection and, if the results are normal, annually thereafter.

Eighty-eight percent of participants with a self-reported nadir CD4 count of < 350 cells/μL indicated that they were currently taking antiretrovirals for HIV, and 79% with a nadir CD4 count of 350-500 cells/μL reported taking antiretrovirals. The newly-updated US Department of Health and Human Services (DHHS) guidelines for HIV treatment state that all adolescents and adults with HIV infection and CD4 counts ≤350 cells/μL, including pregnant women, should be started on antiretroviral therapy immediately, regardless of whether they have clinical symptoms. The new guidelines also recommend antiretroviral therapy in patients with CD4 counts between 350 and 500 cells/μL.<sup>5</sup>

It appears that there are high levels of TB screening among patients in the MMP and a high percent of participants with CD4 counts <350 cells/μL or between 350-500 cells/μL who report use of antiretrovirals. Areas for improvement in preventive care may include Pap smear screening for women, STD screening among sexually active patients, screening for hepatitis B, and hepatitis B and influenza immunizations.

These data are based on interviews and may suffer from recall bias, or participants may not know whether they received specific screening tests or immunizations. In addition, the data presented here are not locally representative due to low participation rates and the results may not be generalizable.

This analysis provides an important first step in evaluating whether people with HIV in King County are receiving appropriate and adequate preventive care. It will be important to link data from the MMP interview with data from the medical record abstractions when it is available for a more comprehensive look at preventive care among MMP participants. The information provided by the MMP may be used by clinicians and Ryan White planning groups to assess whether patients are receiving optimal care and help them advocate for additional resources.

As patients with HIV live longer, they are increasingly affected by other medical conditions, and care providers should ensure patients undergo recommended screening tests and immunizations in order to reduce their risk for these comorbidities.

- *Contributed by Elizabeth Barash*

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<sup>1</sup>Centers for Disease Control and Prevention. Prevention and treatment of tuberculosis among patients infected with human immunodeficiency virus: Principles of therapy and revised recommendations. MMWR Recomm Rep 1998 Oct 30;47(RR-20):1-58.

<http://www.cdc.gov/mmwr/preview/mmwrhtml/00055357.htm>

<sup>2</sup>Centers for Disease Control and Prevention. Guidelines for Prevention and Treatment of Opportunistic Infections in HIV-Infected Adults and Adolescents Recommendations from CDC, the National Institutes of Health, and the HIV Medicine Association of the Infectious Diseases Society of America MMWR 2009;58(RR-4). <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5804a1.htm>

<sup>3</sup>CDC. Recommendations and Reports: "Incorporating HIV Prevention into the Medical Care of Persons Living with HIV". July 18, 2003/52(RR12);1-24.

<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5212a1.htm>

<sup>4</sup>Public Health – Seattle and King County 2008 Sexually Transmitted Diseases (STD) Epidemiology Report

<http://www.kingcounty.gov/healthservices/health/communicable/std/statistics>.

<sup>5</sup>Panel on Antiretroviral Guidelines for Adults and Adolescents. Guidelines for the use of antiretroviral agents in HIV-1-infected adults and adolescents. Department of Health and Human Services. December 1, 2009; 1-161.

<http://www.aids-ed.org/aidsetc?page=etres-display&resource=etres-103>